

# *DRILLING FLUIDS, DRILLING FLUIDS ADDITIVES AND METHODS USEFUL FOR LIMITING TAR SANDS ACCRETION ON METAL SURFACES*

## **Abstract**

Fluids useful in oil well drilling operations are described. The fluids comprise standard viscosifying and fluid loss control additives along with phosphonates or phosphate esters of organic ligands. The addition of the phosphonates or phosphate esters at effective concentrations prevents the adherence of heavy oil and heavy oil laden drill cuttings to drill pipe strings and well bore casings.